A NEW FISH OF THE GENUS *OPHIOSCION*, FAMILY SCIAENIDAE, FROM CARIBBEAN COSTA RICA

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The fishes of Caribbean Central America, and particularly Costa Rica, are imperfectly known. Thus it was of special interest and significance to make a detailed study of a small collection of fishes recently received by the University of Florida Collections from Tortuguero, a small village on the northern coast of Costa Rica. The species and notes on the ecology of the fishes in this collection will be discussed in detail elsewhere (Caldwell, Ogren, and Giovannoli, MS). Among the marine fishes were two specimens of an undescribed species of the genus *Ophioscion* of the family Sciaenidae. This species may now be known as:

Ophioscion costaricensis, new species

Figure 1

Diagnosis

An *Ophioscion* (as defined by Schultz, 1945) with a very small eye—4.8 and 5.0 percent of standard length in specimens 110 and 117 mm. in standard length. Dorsal fin count X—I, 22-23; anal fin II, 9; 49 pored scales in lateral line; and 8 + 1 + 14 gill rakers on the first gill arch.

Description

To facilitate comparisons between *O. costaricensis* and the other Atlantic species of *Ophioscion*, as discussed by Schultz (1945), I have taken most of the measurements he included. These are presented as part of the description of *O. costaricensis* and appear in Table 1, along with the measurements based on Schultz for *O. microps* (Steindachner) and *O. brasiliensis* Schultz, its two closest relatives. Other, more subjective, characters of *O. costaricensis* are apparent from the photograph of the holotype which appears as Figure 1.

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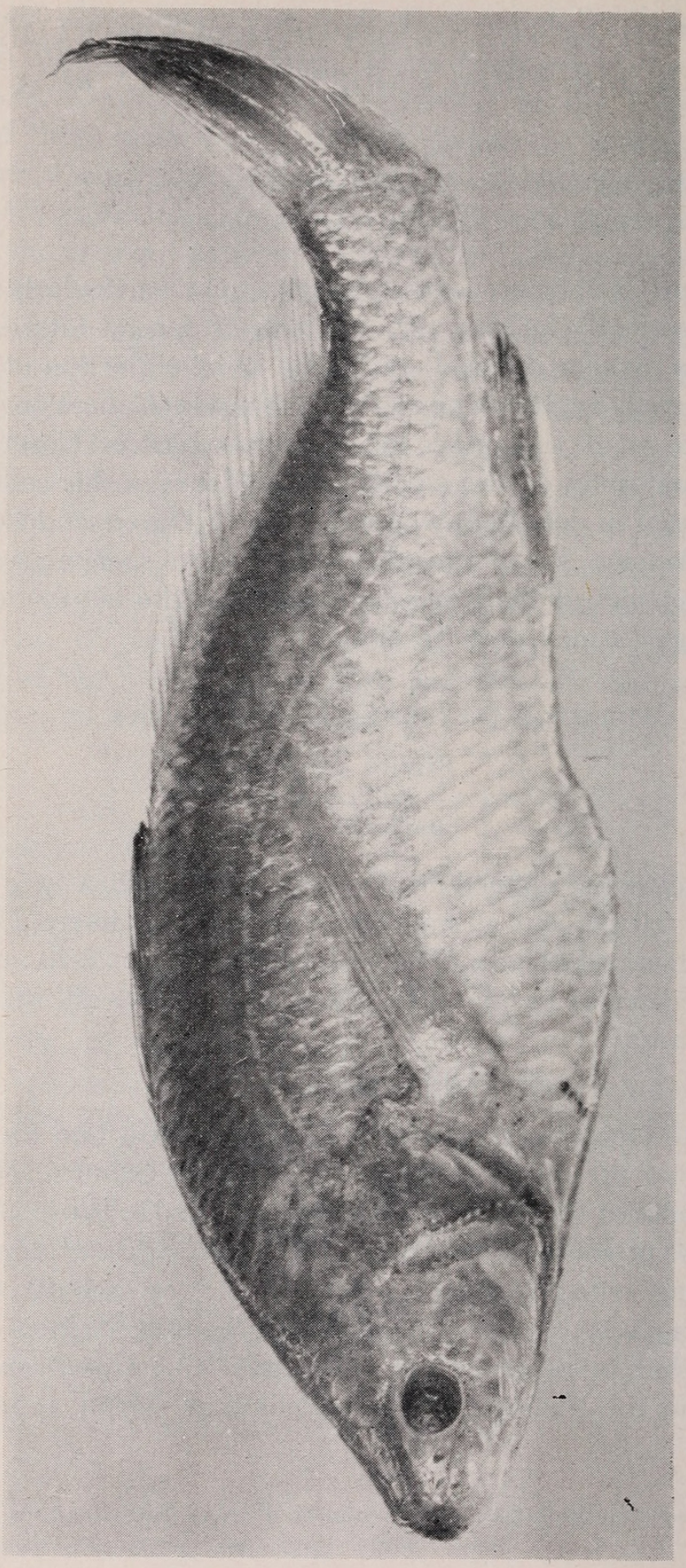

Figure 1. *Ophioscion costaricensis*, new species, holotype, 116.6 mm. in standard length, from Tortuguero, Caribbean coast of Costa Rica, Central America.

Characters not obvious from a study of the table and figure are: The ventral profile is nearly straight in the paratype (as figured for other species of this genus by Schultz 1945), and the protruding ventral outline of the holotype is an artifact of preservation. Tip of lower jaw without barbels. Pores on the tip of snout and lower jaw as described and figured for the genus *Ophioscion* by Schultz (1945). Pseudobranchiae well developed. Scales ctenoid. The more dorsal preopercular spines smaller than those nearer lower angle of preopercle; none hooked downward. Skull with cavernous spaces as described for this and other sciaenid genera by Schultz (1945). Teeth in villiform bands in both jaws, the outer ones of the upper jaw enlarged. Second dorsal spine slightly enlarged (heavier than the following ones). Second anal spine enlarged, but not reaching tips of soft rays. Posterior margins of dorsal and anal soft-rayed fins rounded; pectorals pointed. Posterior edge of spinous dorsal fin nearly straight. Mid-rays of caudal fin longest. Tip of filament of first pelvic soft ray reaching to anus; pectoral fins reaching beyond anus. Gill rakers short and slender, the longest equaling diameter of pupil.

Color

In alcohol, pale brown above, lighter below, with numerous tiny dark punctulations on scales except on ventral third of body of the holotype (missing only on most ventral part of body in the paratype—nearly covering the sides). Membranes and rays of dorsal and most of anal fins dusky, the last two anal rays and their membranes clear. Distal edge of spinous dorsal membrane nearly black. Inner ventral fin rays and membranes dusky toward their distal edges; outer rays and membranes dusky nearly to base of fin; filamentous first ventral ray white. Pectoral rays dusky and their membranes mostly clear. Caudal rays and membranes dusky.

Relationships

With the recent revision (Schultz, 1945) of the Atlantic species of *Ophioscion* and the detailed descriptions of the Pacific American forms presented by Meek and Hildebrand (1925) and Hildebrand (1946: 294), the relationships of *O. costaricensis* have a firm basis.

TABLE 1. PROPORTIONAL MEASUREMENTS (EXPRESSED IN HUNDREDTHS OF STANDARD LENGTH) AND COUNTS OF SELECTED SPECIES OF THE GENUS *OPHIOSCION*. THE DATA FOR *O. MICROPS* AND *O. BRASILIENSIS* ARE BASED ON SCHULTZ (1945). THE FIGURES IN PARENTHESES AFTER THE DATA FOR *O. COSTARICENSIS* ARE THE EMPIRICAL MEASUREMENTS IN MM. FOR EASE IN COMPARING ONTOGENETIC RELATIONSHIPS BETWEEN THE SPECIES, THE SPECIMENS ARE ARRANGED ACCORDING TO SIZE.

CHARACTER	*O. microps*		*O. brasiliensis*		*O. costaricensis*	
	A	B	holotype	paratype	holotype	paratype
Dorsal fin rays	XI—I, 21	XI—I, 19	X—I, 22	X—I, 21	X—I, 23	X—I, 22
Anal fin rays	II,9	II,9	II,9	II,9	II,9	II,9
Pectoral fin rays	ii,17-ii,16	ii,16-ii,16	ii,16-ii,17	ii,17-ii,17	ii,17-ii,17	ii,17-ii,17
Pelvic fin rays	I,5	I,5	I,5	I,5	I,5	I,5
Scale rows above lateral line to base of 1st dorsal soft ray	4	4	5	5	5	5
Scale rows above lateral line to dorsal origin	5	5	5	5	5	5
Vertical scale rows above lateral line	50	51	46	46	48	49
Pored scales in lateral line	—	—	45	46	49	49
Zig-zag scale rows around caudal peduncle	18	18	17	17	16	17
Scale rows between lateral line and anal origin	8	7	7	7	7	7
1st arch gill rakers	11+1+18	11+1+19	8+1+13	9+1+13	8+1+14	8+1+14
Preopercular spines	—	—	—	[9]	9	10
Standard length (mm.)	60.3	66.3	77	89	109.6	116.6
Head length	33.2	32.1	33.8	33.2	30.5 (33.4)	32.1 (37.4)
Greatest body depth	31.5	30.2	32.5	30.8	30.0 (32.9)	32.4 (37.8)
Diameter of eye	6.5	6.6	7.5	7.4	5.0 (5.5)	4.8 (5.6)
Snout length	8.6	9.9	9.2	8.8	8.7 (9.5)	8.3 (9.7)
Front of upper lip to rear tip of maxillary	11.9	11.3	12.2	11.8	10.2 (11.2)	10.9 (12.7)

Postorbital head length	19.1	18.5	18.8	18.4	18.8 (20.6)	19.0 (22.2)
Bony interorbital width	11.3	10.4	9.7	9.1	11.4 (12.5)	11.6 (13.5)
Base of last anal ray to midcaudal base (caudal peduncle length)	24.9	26.8	22.1	23.6	24.2 (26.5)	24.6 (28.7)
Least depth caudal peduncle	10.1	9.9	10.0	9.6	9.9 (10.8)	10.6 (12.4)
Length of second dorsal base	35.6	33.2	32.5	31.2	34.0 (37.3)	34.0 (39.7)
Length of anal fin base	12.6	12.5	12.5	12.9	12.0 (13.2)	12.2 (14.2)
Third dorsal spine length	19.8	19.6	17.5	——	16.2 (17.8)	18.2 (21.2)
Second dorsal spine length	13.4	14.0	12.3	11.8	11.5 (12.6)	11.4 (13.3)
Second anal spine length	18.6	18.1	16.2	13.8	15.6 (17.1)	15.7 (18.3)
Longest pectoral ray	25.7	21.1	24.4	22.5	25.0 (27.4)	27.1 (31.6)
Longest pelvic soft ray	23.7	23.1	25.1	25.8	22.2 (24.3)	24.9 (29.1)
Pelvic spine length	13.3	12.4	12.1	11.7	11.7 (12.8)	12.0 (14.0)
Longest midcaudal ray	—	—	26.0	23.0	28.4 (31.1)	27.8 (32.4)
Longest gill raker	2.7	2.7	3.6	2.8	2.8 (3.1)	3.1 (3.6)
Tip of snout to origin of spinous dorsal	38.1	36.9	37.1	36.5	35.5 (38.9)	36.9 (43.1)
Tip of snout to anal origin	66.8	65.4	68.3	70.8	66.2 (72.6)	67.2 (78.3)
Tip of snout to pelvic insertion	—	—	35.4	35.5	32.5 (35.6)	33.4 (38.9)
Tip of snout to pectoral insertion	33.3	32.1	34.4	33.7	30.3 (33.2)	31.8 (37.1)

The species of this genus are all quite similar in appearance, with the separations often based on relatively minor characters. Hildebrand (*loc. cit.*) has pointed out that the number of rays in the anal fin is constant within a species and that "the differences of a single ray in this fin apparently may be regarded as of specific importance." Schultz (1945) relied heavily on this character in separating the 7 Atlantic species in his key, although he found a single specimen of *O. panamensis* Schultz with an "off" anal soft-ray count. *O. costaricensis* differs from all other Atlantic species of the genus except *O. brasiliensis* and *O. microps* in having a II, 9 anal fin count. According to Meek and Hildebrand (1925), only *O. vermicularis* (Günther) of the Pacific species has a II, 9 count. *O. costaricensis* differs from *O. vermicularis* in having fewer dorsal soft rays; fewer lateral-line scales; the mid-caudal rays longest; a smaller eye; and other characters apparent from descriptions of the two forms. *O. costaricensis* differs from *O. brasiliensis,* as defined by Schultz (1945), in having a much smaller eye; greater bony interorbital; a slightly higher lateral-line count; a slighter longer second dorsal fin base, pectoral fin, and midcaudal fin rays; in addition to other minor proportional characters shown in Table 1. *O. costaricensis* differs from *O. microps,* as discussed by Schultz (1945), in having fewer dorsal spines; apparently averaging a slightly higher dorsal soft-ray count; fewer gill rakers on both the upper and lower limbs of the first gill arches; more scales between the lateral line and the base of the soft dorsal fin; fewer zig-zag rows of scales around the caudal peduncle; a smaller eye; shorter anal spine; a slightly lower soft dorsal fin; and other minor proportional characters shown in Table 1. Aside from the character of anal fin count, *O. costaricensis* differs from all other American species of *Ophioscion* in combinations of characters given in the descriptions of other species in Schultz (1945), Meek and Hildebrand (1925), and Hildebrand (1946).

When Schultz's key (1945: 126) to the Atlantic species of *Ophioscion* is utilized, *O. costaricensis* will insert in couplet three, between its closest relatives *O. brasiliensis* and *O. microps,* from which it has been distinguished in the above discussion. When the key to the Panamanian species of the genus is utilized (Meek and Hildebrand, 1925: 636), *O. costaricensis* would be identified as the Pacific form, *O. typicus* Gill, from which it differs in having more anal soft-rays and a smaller eye.

Holotype

University of Florida Collections (UF) 5831, 116.6 mm. in standard length, found dead on the open sea beach by Larry H. Ogren on July 15, 1956, at Tortuguero, Caribbean Costa Rica, Central America (latitude 10°34′ N., longitude 83°32′ W., approximately 52 miles northwest of Limon, Costa Rica).

Paratype

UF 5830, 109.6 mm. in standard length, found with the holotype.

Remarks

Named *costaricensis* in honour of the country upon whose shores the specimens were collected.

The proportional measurements on *O. costaricensis* were made with the use of dial calipers calibrated to tenths of a millimeter. The last soft ray of the dorsal and anal fins is split to its base and was counted as one.

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